

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended)        A membrane electrode unit for electrochemical equipment, comprising an ionically conductive membrane with a front side and back side, a first catalyst layer on the front side of the membrane, a first gas distributor substrate associated with the front side of the membrane and the first catalyst layer, a second catalyst layer on the back side of the membrane, and a second gas distributor substrate associated with the back side of the membrane and the second catalyst layer, said first gas distributor substrate having size dimensions smaller than those of the ionically conductive membrane and said second gas distributor substrate having size dimensions substantially equal to those of the ionically conductive membrane, wherein a portion of the front side of the ionically conductive membrane is not supported by the first gas distributor substrate, and wherein the edges of the first and second substrates and the portion of the front side of the ionically conductive membrane not supported by the first gas distributor substrate are surrounded by a sealing material wherein said sealing material is an organic polymer that adheres to the membrane and impregnates the edge regions of the first and second gas distributor substrates to a depth of at least 1 mm and wherein the sealing material seals the edge regions of the membrane electrode unit.

2. (previously presented)    A membrane electrode unit according to claim 1, wherein the catalyst layer on the front side and the catalyst layer on the back side of the ionically conductive membrane have different size dimensions.

3. (previously presented)    A membrane electrode unit according to claim 1, wherein the catalyst layer on the front side and the catalyst layer on the back side of the ionically

conductive membrane have the same size dimensions.

4. (cancelled)

5. (original) A membrane electrode unit according to claim 1, wherein the catalyst layers on the front side and on the back side contain catalysts containing noble metals and optionally ionically conductive materials.

6. (original) A membrane electrode unit according to claim 1, wherein the ionically conductive membrane comprises organic polymers, such as proton-conducting perfluorinated polymeric sulfonic acid compounds, doped polybenzimidazoles, polyether ketones, polysulfones or ionically conducting ceramic materials, and has a thickness of 10 to 200  $\mu\text{m}$ .

7. (original) A membrane electrode unit according to claim 1, wherein the gas distributor substrate comprises porous electrically conductive materials containing carbon fiber paper, carbon fiber nonwoven cloth, carbon fiber cloth, metal mesh, metallized fiber cloth, or combination thereof.

8. (cancelled)

9. (cancelled)

10. (currently amended) A membrane electrode unit according to claim 1, wherein the sealing material comprises a thermoplastic polymer selected from the group consisting of polyethylene, polypropylene, polytetrafluoroethylene, PVDF, EPDM, polyester, polyamide, polyamide elastomers, polyimide, polyurethane, silicone, silicone elastomers, and combinations thereof ~~or a thermosetting polymer selected from the group consisting of epoxides, cyanoacrylates and combinations thereof.~~

11. (cancelled).

12. (withdrawn)      A process for producing a membrane electrode unit according to claim 1, comprising combining two catalyst-coated gas distributor substrates with the front and back sides of an ionically conductive membrane.

13. (withdrawn)      A process for producing a membrane electrode unit according to claim 1, comprising combining two gas distributor substrates which are not catalyst-coated with the front and back sides of an ionically conductive membrane coated with catalyst on both sides.

14. (withdrawn)      A process for producing a membrane electrode unit according to claim 8, wherein the portion of the front side of the ionically conductive membrane not supported by the first gas distributor substrate is brought directly into contact with a sealing material.

15. (withdrawn)      A process for producing a membrane electrode unit according to claim 14, wherein the sealing material is cured by elevated pressure and elevated temperature or by contact with air moisture and/or elevated temperature.

16. (previously presented)      A cell stack for electrochemical equipment comprising the membrane electrode unit according claim 1.

17. (previously presented)      A fuel cell for electrochemical equipment comprising the membrane electrode unit according to claim 1.